AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-155

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

********** AMSAT 2006 Space Symposium **********

The AMSAT web team has posted informational pages on the AMSAT web site. You can find the announcement with many links at:
http://www.amsat-org/amsat-new/symposium

The Call for Papers for the 2006 Symposium can found at:
http://www.amsat.org/amsat-new/symposium/2006CallForPapers.php

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SB SAT @ AMSAT $ANS-155.01
Mass Amateur Radio Satellite Launch Planned for June 28

AMSAT News Service Bulletin 155.01
From AMSAT HQ SILVER SPRING, MD.
June 4, 2006
To All RADIO AMATEURS
BID: $ANS-155.01

This week Trevor, M5AKA published information about the thirteen Amateur Radio Satellites will be launched on June 28, 2006 on a DNEPR-1LV rocket from the Kazakstan Baikonur Cosmodrome in what will be the largest ever deployment of Amateur Radio Satellites. A fourteenth satellite will operate on commercial frequencies.

The satellites will be put into a 500 by 566 km orbit with an inclination of 97 degrees. Each satellite is a 10cm cube weighing just 1kg into which is packed the battery, transmitter and the various experiments.

Twelve of the satellites have downlinks in the Amateur Radio Satellite Service allocation between 435 and 438 MHz and one will operate on

145.950 MHz so there will be lots of signals to listen out for after launch. Frequency coordination was done by the International Amateur Radio Union (IARU). Hans, ZS6AKV serves as the IARU Amateur Satellite Advisor and leads a panel of experts which assists in frequency coordination and provide advice to satellite builders. More information about the IARU Satellite Frequency Coordination process can be found on-line at http://www.iaru.org/satellite/.

Further information on the Dnepr Launch 1 can be seen at:
http://littonlab.atl.calpoly.edu/

One of the CubeSats to be launched is known as SEEDS. Built by students at the Nihon-University it contains a CW beacon, Digi-Talker and other experiments.

After launch SEEDS will operate a CW beacon on 437.485 MHz using the callsign JQ1YGU. The Digi-Talker experiment will be activated later. The builders say they look forward to receiving reports and data from the satellite from Amateur Radio operators and SWL's all over the world.

Ralph, W[illegible]RPK, maintains a web page with up-to-date CubeSat status at:
http://showcase.netins.net/web/wallio/CubeSat.htm

The 28 June CubeSat launch manifest, summarized below, is from Ralph's web page. Please refer to the web pages for detailed information.

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Satellite:  ICEcube1 - Cornell University (USA)
Callsign:   W2CXM
Downlink:   437.305 MHz (600mW)
Format:     9600bps FM FSK AX.25

More Info:  http://www.mae.cornell.edu/cubesat/
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Satellite:  ICEcube2 - Cornell University (USA)
Callsign:   N2VR
Downlink:   437.425 MHz (0.6W)
Format:     9600bps FM FSK AX.25

More Info:  http://www.mae.cornell.edu/cubesat/
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Satellite:  ION - University of Illinois (USA)
Callsign:   TBA
Downlink:   437.505 MHz (2W)
Format:     1200bps FM AFSK AX.25 ~5min Beacon Interval

More Info:  http://courses.ece.uiuc.edu/cubesat/
            http://www.interave.net/cubesat/Formal_Documentation/
            ION_Overview.pdf (careful with the line wrap)
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Satellite:  PolySat CP1 - California Polytechnic State University (USA)
Callsign:   N6CP
Downlink:   436.845 MHz (500mW)
Format:     15bps DTMF & CW (both FM)

More Info:  http://polysat.calpoly.edu/
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Satellite:  PolySat CP2 - California Polytechnic State University (USA)
Callsign:   Unknown
Downlink:   437.325 MHz (1W)
Format:     1200bps FM AFSK AX.25, CW beacon
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More Info:  http://polysat.calpoly.edu/
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Satellite:  AeroCube1 - The Aerospace Corporation
Callsign:   Not Amateur Radio
Downlink:   902-928 MHz (2W)
Format:     9600bps GFSK

More Info:  http://www.aero.org/
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Satellite:  HAUSAT-1 - Hankuk Aviation University (South Korea)
Callsign:   D90HP
Downlink:   437.465 MHz (500mW)
Format:     1200bps FM AFSK AX.25, CW ID Beacon

More Info:  http://134.75.55.85/new_version/english/hausat_1/index.php
            Telemetry Information
            http://134.75.55.85/new_version/english/hausat_1/
            hau1_telemetry_info.php (careful with the line wrap)
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Satellite:  nCUBE-1 - The nCUBE Project (four universities - Norway)
Callsign:   LA1CUB
Downlink:   437.305 MHz (1W EIRP)
Format:     9600bps GMSK AX.25, Digipeating possible
CW ID:      "LA1CUB Ncube1 Norwegian Cubesat www.ncube.no"

More Info:  http://www.ncube.no/
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Satellite:  SEEDS - Nihon University (Japan)
Callsign:   JQ1YGU
Downlink:   437.485 MHz  (450mW)
Format:     Digitalker, 1200bps FM AFSK AX.25, CW (90mW)

More Info:  http://cubesat.aero.cst.nihon-u.ac.jp/english/main_e.html
            http://cubesat.aero.cst.nihon-u.ac.jp/english/operation_e.html
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Satellite:  KUTESat Pathfinder - University of Kansas
Callsign:   KC?RMW
Downlink:   437.385 MHz (500mW)
Format:     1200bps FM AFSK AX.25

More Info:  http://www.engr.ku.edu/ae/kutesat.htm
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Satellite:  MEROPE - Montana State University (USA)
Callsign:   K7MSU-01
Downlink:   145.980 MHz (500mW)
Format:     1200bps FM AFSK

More Info:  http://www.ssel.montana.edu/merope/
            http://www.ssel.montana.edu/merope/ham/
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Satellite:  RINCON - University of Arizona (USA)
Callsign:   WA4CEW
Downlink:   436.870 MHz (400 mW) Main Transmitter
Format:     1200 bps AFSK AX.25
Downlink:   437.345 MHz  (10 mW) Beacon Transmitter
Format:     1200 bps PSK AX.25
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More Info:  http://cubesat.arizona.edu/rincon_sat/
            Cubesat II Operating System Owner's Manual
            http://bach.as.arizona.edu/~cubesat/cubesat_manual/index.html
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Satellite:  SACRED - University of Arizona (USA)
Callsign:   WA4CEW
Downlink:   436.870 MHz (400mW)
Format:     1200bps FM AFSK AX.25

More Info:  http://cubesat.arizona.edu/sacred_sat/
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Satellite:  Mea Huaka'i (Voyager) - University of Hawaii (USA)
Callsign:   Unknown
Downlink:   437.405 MHz (500mW)
              5.840 GHz (1mW)
Format:     1200bps FM AFSK AX.25

More Info:  http://www-ee.eng.hawaii.edu/~cubesat/

[ANS thanks Trevor, M5AKA; Ralph, W?RPK; and the CubeSat teams
 for the above information]

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SB SAT @ AMSAT $ANS-155.02
Two Special Events on AO-51 in June

AMSAT News Service Bulletin 155.02
From AMSAT HQ SILVER SPRING, MD.
June 4, 2006
To All RADIO AMATEURS
BID: $ANS-155.02

Mike, KE4AZN, Amsat VP-Operations, and Echo Command Station reminds
AO-51 users of two special events on this satellite during June.

The first event will be Kid's Day on AO-51 on June 17, 2006.  This
event is open to all kids, worldwide. We ask all amateur radio stations
to give this short time window to promote satellite operations with kids,
by actually showing a kid how to make contacts via AO-51, providing a
station to contact, or stepping aside to allow others to make contacts
with the kids.  During the Kid's Day event, please limit contacts to
stations that are operating with kids at the microphone.

AO-51 will be configured in the following mode during Kid's Day.
Please note we will use the normal AO-51 uplink frequency for the
event with the PL tone will be turned ON.

Uplink:   145.920 mhz FM voice 67 Hz PL Tone
Downlink: 435.300 mhz FM voice
The digital transponder on 435.150 will be turned off.

See http://www.arrl.org/FandES/ead/kd-rules.html on the ARRL website for
more Kids Day information.

Next, starting on June 19 AO-51 will be in the Field Day Configuration
to give stations time to test their gear before the June 24-25 event.

         FM Repeater ON  - Uplink   145.920 mHz FM with 67 hz Tone
                           Downlink 435.300 mHz FM
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         QRP Repeater ON - Uplink   145.880 mHz FM, QRP Power Limits
                           Downlink 435.150 mHz FM

More details regarding the main repeater and the QRP repeater will be
published prior to Field Day 2006.

[ANS thanks Mike, KE4AZN, Echo Command Station for the above information]

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SB SAT @ AMSAT $ANS-155.03
US Naval Academy Satellite Lab Student Demos Coming in June

AMSAT News Service Bulletin 155.03
From AMSAT HQ SILVER SPRING, MD.
June 4, 2006
To All RADIO AMATEURS
BID: $ANS-155.03

Bob, WB4APR says he and his USNA Satellite Lab team will be doing
satellite operating demonstrations every Monday, Tuesday, and Wed-
nesday starting on June 5.  Planned operating hours are between
0800 to 1200 and 1330 to 1530 EDT.  These demos will be for hundreds
of high school students who will be visiting the US Naval Academy
during the first three weeks of June.

[ANS thanks Bob, WB4APR for the above information]

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SB SAT @ AMSAT $ANS-155.04
AO-27 In Eclipse Season

AMSAT News Service Bulletin 155.04
From AMSAT HQ SILVER SPRING, MD.
June 4, 2006
To All RADIO AMATEURS
BID: $ANS-155.04

The AO-27 Command Team reminds users who have been looking for this
satellit that AO-27 is in its eclipse season. This means the batteries
are dropping below the watchdog values and turning off the scheduler
software.

The Command Team needs to reset it each time it happens.  Everyone
that has watched AO-27 go thru this period before should remember
this procedure.  This is not an indication that AO-27 is approaching
end of life. It has been running this way for years. Please be patient
until we get back into full sun.

AO-27 takes a bunch of work to keep flying. We are coming up on 14
years on orbit in September, well past what any of us expected when
we launched it.

[ANS thanks the AO-27 Command Team for the above information]

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SB SAT @ AMSAT $ANS-155.05
There's Still Time to Enter the SuitSat Chicken Little Contest
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AMSAT News Service Bulletin 155.05
From AMSAT HQ SILVER SPRING, MD.
June 4, 2006
To All RADIO AMATEURS
BID: $ANS-155.05

Frank, KA3HDO, who is the ARISS International Chairman and AMSAT's V.P. for Human Spaceflight Programs reminds everyone of the SuitSat "Chicken Little" contest to guess the date when SuitSat-1 will re-enter the atmosphere. There are three entry categories: Grades K-8, Grades 9-12 and adult. Certificates will be provided to winners of each group. The last date to enter the contest is July 1.

For more information, please go to:
http://www.amsat.org/amsat-new/ariss/suitsatContest.php

The ARISS team thanks Emily Clarke, N1DID, for setting this up.

[ANS thanks Frank, KA3HDO for the above information]

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SB SAT @ AMSAT $ANS-155.06
Deadline Approaches for AMSAT-NA Board of Directors Nominations

AMSAT News Service Bulletin 155.06
From AMSAT HQ SILVER SPRING, MD.
June 4, 2006
To All RADIO AMATEURS
BID: $ANS-155.06

It is time to submit nominations for the upcoming open seats on the AMSAT-NA Board of Directors. A nomination requires either one Member Society or five current individual members to noninate an AMSAT member for the position. A director serves for a period of two years. Three directors' terms expire this year: Tom Clark, K3IO, Lou McFadin, W5DID, and Paul Shuch, N6TX. Written nominations must be received at the AMSAT office no later than 12 June 2006.

Nominations MUST be in writing and mailed to:
AMSAT
850 Sligo Ave #600
Silver Spring, MD 20901

[ANS thanks the AMSAT Journal for the above information]

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SB SAT @ AMSAT $ANS-155.07
Delfi-C3 CubeSat Team Provides Update on Their Next Satellite

AMSAT News Service Bulletin 155.07
From AMSAT HQ SILVER SPRING, MD.
June 4, 2006
To All RADIO AMATEURS
BID: $ANS-155.07

This week, Wouter Jan Ubbels, PE4WJ, the Delfi-C3 Project Manager Electronic Systems and Communications at the Delft University of Technology in The Netherlands sent information about the next satellite being designed at the University.

Delfi-C3 is based on a three-unit CubeSat. Its primary mission objective will be, besides being an educational one, a technology demonstration of three novel payloads. It will also include a Mode U-V Amateur Radio linear transponder with 40kHz bandpass running 400mW PEP.

Telemetry decoding software will be made available to amateur radio operators and universities which will allow them to decode and display near real time telemetry.

Delfi-C3 will have a 1200 Baud AX.25 BPSK downlink so they plan to include the possibility of using the soundcard to decode the telemetry instead of having the need for a separate hardware PSK modem. This software is planned to allow for a data upload to the central Delfi-C3 ground station via the Internet for data processing.

The satellite will be in telemetry mode for the first three months of the mission, after which it will be switched to transponder mode. At present breadboards and prototype hardware are being produced. The University aims for a launch in 2007.

The Delfi-C3 team is planning to attend the AMSAT-UK colloquium this year where they will give a presentation on the progress of the project. You can find more information on Delfi-C3 at their website: http://www.delfic3.nl

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SB SAT @ AMSAT $ANS-155.08
ARISS Status May 29, 2006

AMSAT News Service Bulletin 155.08
From AMSAT HQ SILVER SPRING, MD.
June 4, 2006
To All RADIO AMATEURS
BID: $ANS-155.08

1. Virgilio Primary School Contact Successful
On Monday, May 22, fifteen students at the Virgilio Primary School in Mestre, Venice, Italy spoke with astronaut Jeff Williams, KD5TVQ. Fifteen questions were asked and answered as approximately 250 students and teachers looked on. Several media outlets covered the event, including television stations RAI 3 Veneto, Antenna 3, Televenezia, and Canale 5, and Il Gazzettino and La Nuova Mestre/Venezia newspapers.

2. School Contacts
The ARISS contact with Salt Brook Elementary School in New Providence, New Jersey was unsuccessful on Wednesday, May 31. To be rescheduled at a later date.

Scarlett Middle School, a NASA Explorer School, in Ann Arbor, Michigan has been scheduled for a contact on Tuesday, June 6. The event will be publicized electronically. Media coverage may include the Ann Arbor News and local radio stations: WUOM, WEMU and WAAM. Arrow Communications, the local Amateur Radio club, will coordinate and promote the event with the local newspaper and area television stations.

3. Crew Debrief Held
On May 24, the ARISS-U.S. team participated in a crew debrief with Bill McArthur, KC5ACR. Bill's overall impression of the ARISS program was positive.

4. ARISS Delegates Give Talks at Hamvention
ARISS Delegates Frank Bauer and Rosalie White participated in a joint presentation entitled, "ARISS and SuitSat: Current Status and Future Opportunities," at the Dayton Hamvention 2006 AMSAT Forum. Rosalie also gave two talks, "10 Million Hits Tracking an Empty Russian Space Suit" at the ARRL Expo 2006 in Dayton on May 19 and 20.

5. SuitSat Man - a Big Hit at the Dayton Hamvention!
Dressed in a spacesuit labeled "SuitSat-2", Russell Hummel, WB4PGT, a member of the Medical Informatics and Technology Applications Consortium (MITAC), a NASA partnership, made an appearance at the Dayton Hamvention 2006. His attire was well received by hams as they await the re-entry of SuitSat-1 into the earth's atmosphere, and created enthusiasm as the amateur radio community looks forward to SuitSat-2 development planning and potential launch in 2007. A photo can be seen on the ARRL blog: http://www.arrl.org/blog/Dayton%202006

6. McArthur Receives Worked All States Award
Several ARISS members attended Space Center Houston on Thursday, May 25 to hear Bill McArthur, KC5ACR, speak about his time aboard the ISS. ARISS Chairman and AMSAT V.P. for Human Spaceflight Programs, Frank Bauer, KA3HDO, took the opportunity to present a plaque to Bill for his honorary Worked All States award, having contacted amateur radio stations from all 50 states during his Expedition 12 mission.

[ANS thanks Carol, KB3LKI for the above information]

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SB SAT @ AMSAT $ANS-155.09
SatPC32 Version 12.5 Released

AMSAT News Service Bulletin 155.09
From AMSAT HQ SILVER SPRING, MD.
June 4, 2006
To All RADIO AMATEURS
BID: $ANS-155.09

Erich Eichmann, DK1TB has released version 12.5 of his popular satellite tracking program SatPC32. The new version adds features and fixes bugs found in earlier versions. Erich has donated SatPC32 as a fund raiser for AMSAT-NA, AMSAT-DL, and AMSAT-UK.

The program can be downloaded from the author's web site:
http://www.dk1tb.de/downloadeng.htm

The downloaded version is a demo version that requires the user to enter their lat/lon every time they start the program. The program can be made fully functional by purchasing a registration code from the AMSAT store: http://www.amsat-na.com/category.php?c=Software

Presently the only way to get version 12.5 is to download it until AMSAT can offer the version 12.5 on CD.

Existing SatPC32 users may upgrade to version 12.5 for free. Use your existing registration password. Contact, Wayne, W9AE via e-mail at [his-callsign at amsat dot org] if you purchased an earlier CD that did not come with a registration password.

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors

to AMSAT Project Funds, will be eligible to receive additional benefits.
Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM